Indonesian Journal of Global Health Research
Volume 9 Number 1, February 2027
e-ISSN 2715-1972; p-ISSN 2714-9749
https://jurnal2.globalhealthsciencegroup.com/index.php/IJGHR

FACTORS INFLUENCING SELF-CARE AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS: A LITERATURE REVIEW

Dedi Irawan*, Johan Budhiana, Dedi Wahyudin
Bachelor of Nursing, Sekolah Tinggi Ilmu Kesehatan Sukabumi, Jl. Karamat No. 36, Karamat, Gunungpuyuh / Baros, Sukabumi, West Java 43122, Indonesia
*dediirawan0718@gmail.com

ABSTRACT
Type 2 Diabetes Mellitus (T2DM) is a chronic disease that requires continuous management through self-care. The success of self-care is influenced by various internal and external factors that may affect patients' ability to manage their condition. This study aimed to identify and analyze the factors influencing self-care among patients with Type 2 Diabetes Mellitus. This study employed a literature review design following the PRISMA guidelines. Literature searches were conducted using Google Scholar and PubMed for articles published between 2021 and 2025. The search keywords included "Type 2 Diabetes Mellitus," "Self-Care," "Knowledge," "Family Support," and "Self-Efficacy." A total of 3,115 articles were initially identified, comprising 2,450 articles from Google Scholar and 685 from PubMed. After removing 2,353 duplicates and screening the remaining records, 30 articles were assessed for eligibility, and 12 studies met the inclusion criteria. Data were analyzed using narrative synthesis, and the methodological quality of the included studies was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Tools. The findings showed that self-care among patients with T2DM was influenced by several factors, particularly family support, self-efficacy, knowledge, psychological conditions, attitudes and health beliefs, activity ability, and diabetes self-management education. Family support contributed through emotional and instrumental support, motivation, assistance, and accompaniment in self-care activities. The findings regarding the duration of diabetes and its relationship with self-care were inconsistent across studies. Self-care among patients with T2DM is influenced by the interaction of various internal and external factors. A comprehensive approach involving continuous diabetes education, enhancement of self-efficacy, family support, psychological management, and healthy lifestyle promotion is needed to strengthen patients' self-care.

Keywords: family support; knowledge; self-care; self-efficacy; type 2 diabetes mellitus

First Received	Revised	Accepted
13 October 2026	14 October 2026	21 October 2026
Final Proof Received		**Published**
31 October 2026		01 February 2027

How to cite (in APA style)
Irawan, D., Budhiana, J., & Wahyudin, D. (2027). Factors Influencing Self-Care among Patients with Type 2 Diabetes Mellitus: A Literature Review. *Indonesian Journal of Global Health Research*, *9*(1), 45–54. https://doi.org/10.37287/ijghr.v9i1.2854.

INTRODUCTION

Diabetes mellitus (DM) is a non-communicable disease that poses a global public health challenge. It is characterized by elevated blood glucose levels (hyperglycemia) resulting from defects in insulin secretion, insulin action, or both. Prolonged hyperglycemia can cause serious damage to various body organs, particularly the heart, blood vessels, eyes, kidneys, and nerves. Diabetes mellitus can be categorized into several types, including type 1 diabetes, type 2 diabetes, gestational diabetes, and other specific forms associated with particular medical conditions. Among these, type 2 diabetes is the most prevalent, representing approximately 90–95% of all diabetes cases. Type 2 diabetes generally develops because the body cannot use insulin effectively (insulin resistance) and the pancreas gradually produces decreasing amounts of insulin. Risk factors for type 2 diabetes include age, obesity, physical inactivity, an unhealthy diet, family history, and smoking (WHO, 2024).

According to the 11th edition of the International Diabetes Federation (IDF) Diabetes Atlas, approximately 589 million adults aged 20–79 years were living with diabetes worldwide in 2024. Without effective preventive measures, this number is expected to increase to around 853 million by 2050. This situation indicates that diabetes mellitus remains a major challenge for healthcare systems across various countries (Atlas, 2025). Indonesia itself is experiencing a significant rise in cases. The International Diabetes Federation (IDF) reports that Indonesia ranks fifth worldwide in terms of the number of people with diabetes. In 2024, approximately 20.4 million adults in Indonesia were estimated to have diabetes, and this number is projected to rise to 28.6 million by 2050. These high figures demonstrate that diabetes mellitus is a health issue requiring serious attention regarding both prevention and control (IDF, 2025).

According to the 2024 West Java Province Health Profile, results from the 2023 Indonesian Health Survey (SKI) indicate that the prevalence of diabetes mellitus in West Java Province stands at 1.7%, matching the national prevalence rate. Furthermore, in 2024, there were 598,461 recorded cases of diabetes mellitus in West Java, with the achievement of standard-compliant health services reaching 89.56%—an improvement over the previous year. These data underscore that diabetes mellitus remains a major non-communicable disease requiring serious attention. Efforts regarding prevention, early detection, and continuous management are essential to reduce the risk of complications and improve the quality of life for those affected (DINKES, 2024).

Active patient involvement through the practice of self-care is a cornerstone of the continuous management of diabetes mellitus. Successful self-care implementation is not determined solelyby individual factors but is also influenced by a complex interplay of internal and external factors. A review of the literature reveals that previous studies have largely focused on specific factors in isolation; thus, a more comprehensive analysis is needed to fully understand the interrelationships among the various factors influencing self-care behavior. Therefore, this study was conducted to identify the factors influencing self-care behavior in patients with type 2 diabetes mellitus. The study's novelty lies in its synthesis of current scientific evidence regarding these factors, based on articles published between 2021 and 2025. Unlike previous literature reviews that tended to highlight specific factors or rely on older sources, this study integrates a wide range of aspects, including individual, psychological, familial, sociodemographic, and clinical factors. The study aims to identify and synthesize the various factors influencing self-care among patients with type 2 diabetes mellitus.

METHOD

Design

This study used a *literature review* design to identify, examine, and synthesize research evidence regarding factors influencing self-care among patients with Type 2 Diabetes Mellitus (T2DM). The review focused on primary research studies examining factors associated with or influencing self-care, self-care behavior, self-care management, and self-care adherence among patients with T2DM. The included studies examined various factors, including family support, self-efficacy, knowledge, psychological conditions, sociodemographic characteristics, clinical characteristics, health beliefs, and diabetes self-management education. The article selection process was conducted based on the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) guidelines.

Search Strategy

A literature search was conducted using electronic databases, including Google Scholar and PubMed. The search strategy was developed based on the main components of the research topic, namely patients with Type 2 Diabetes Mellitus, self-care, and factors influencing or associated with self-care. The keywords used included "Type 2 Diabetes Mellitus," "Self-Care," "Self-Care

Behavior," "Self-Care Management," "Self-Care Adherence," "Factors," "Family Support," "Self-Efficacy," "Knowledge," "Psychological Factors," and "Diabetes Self-Management Education." The keywords were combined using Boolean operators such as "AND" and "OR" to obtain relevant studies. The literature search was limited to articles published between 2021 and 2025.

Inclusion and Exclusion Criteria

The inclusion criteria were: (1) original research articles involving patients with Type 2 Diabetes Mellitus; (2) studies examining self-care, self-care behavior, self-care management, or adherence to self-care; (3) studies identifying factors associated with or influencing self-care among patients with T2DM; (4) articles published between 2021 and 2025; (5) articles written in Indonesian or English; (6) articles available in full-text format; and (7) studies published in national or international peer-reviewed journals.

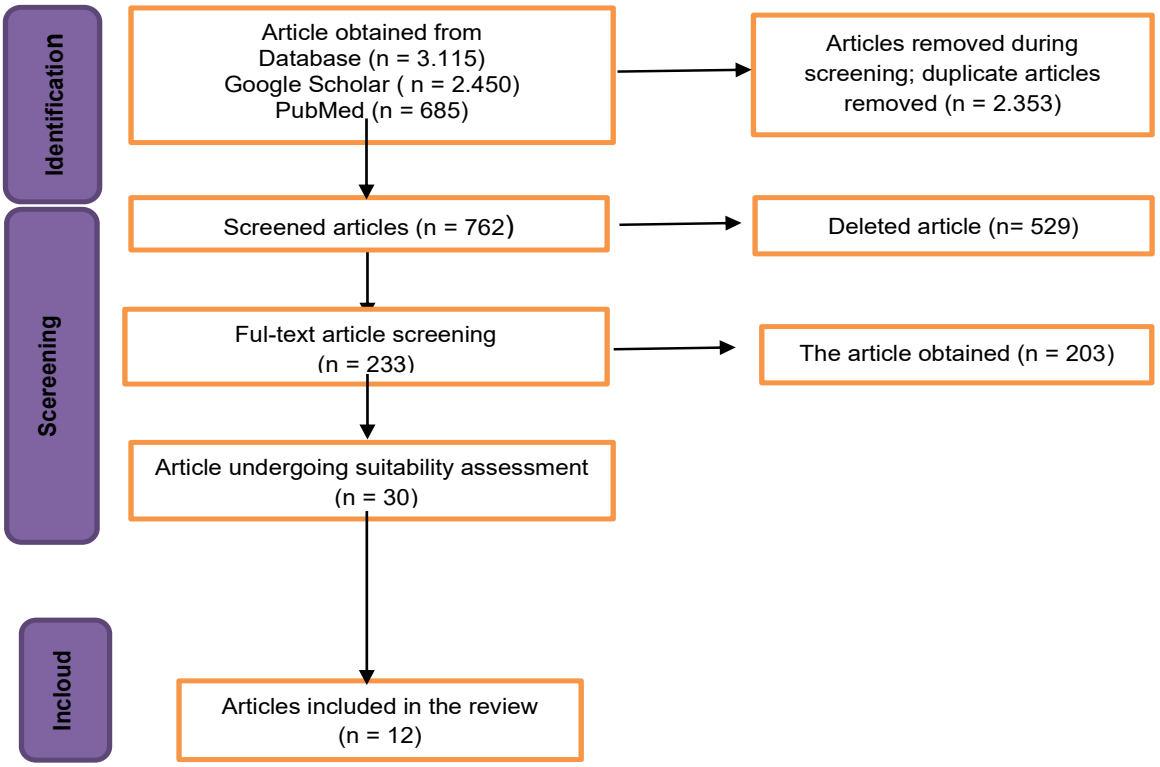
Articles were excluded if they did not involve patients with Type 2 Diabetes Mellitus, did not address self-care or related self-management behaviors, did not examine factors associated with self-care, were not original research articles, were published outside the specified period, were not available in full-text format, or were not relevant to the research topic.

Data Extraction

A total of 3,115 articles were initially identified from the databases, including Google Scholar (n = 2,450) and PubMed (n = 685). After removing 2,353 duplicate articles, 762 articles remained for screening. Of these, 529 articles were excluded, leaving 233 articles for full-text retrieval. However, 203 articles could not be retrieved, and 30 articles were assessed for eligibility. After the eligibility assessment, 18 articles were excluded, resulting in 12 studies that met the inclusion criteria and were included in this literature review. Data were systematically extracted from the 12 included studies. The extracted information included the authors and year of publication, research title, study design, population and sample characteristics, factors examined, self-care variables and measurement methods, statistical analysis, main findings, and conclusions. The extracted data were organized into a summary table to facilitate comparison between studies. The findings were then synthesized narratively to identify common and different factors associated with self-care among patients with type 2 diabetes mellitus (T2DM).

Quality Assessment

The quality of the selected studies was evaluated using the *Joanna Briggs Institute* (JBI) Critical Appraisal Tools, with the assessment criteria tailored to each study design. The assessment considered methodological aspects such as the clarity of inclusion criteria, appropriateness of participant selection, the assessment covered the validity and reliability of measurement instruments, the identification and control of confounding variables, the suitability of statistical analyses, and the alignment between the research design and the study objectives. The quality assessment results were recorded using the categories "Yes," "No," "Unclear," and "Not Applicable (N/A)." The assessment was used to determine the methodological quality and relevance of each study included in the *literature review*.



RESULT

Table 1.
Analysis Article

No	Research & Publications	Title	Types or research	Population & Sample	Results	Conclusion
1.	(Nadya et al., 2024)	The Relationship Between Familly Support and Self-Care Behavior in Patients with Diabetic Ulcers	Cross Sectional	A purposive sample consisting of 41 respondents.	Family support is significantly associated With self-care behavior in patients with diabetic ulcers. (p=0,004).	Family support improves self-care behavior in patients with diabetic ulcers.
2.	(Sagala et al., 2023)	The Relationship Between Family Support and Adherence to Self-Care Activities Among Patients with Diabetes Mellitus at Gunung Tua Community Health Center	Cross Sectional	Population : 96 patients with diabetes mellitus. Sample:77 respondents	A significant association was found between family support and adherence to self-care practices (p = 0.001).	Family support boosts self-care compliance and helps prevent complications.
3.	(Irawan et al., 2021)	Factors Influencing the Quality of Life of Patients with Type 2 Diabetes Mellitus at Babakan Sari Community Health Center	Cross Sectional	The study included 110 respondents.	The study revealed significant associations between quality of life among patients with diabetes mellitus and	The findings indicated that gender, duration of illness, knowledge, anxiety, stress, family support, and

No	Research & Publications	Title	Types or research	Population & Sample	Results	Conclusion
					several factors, including gender ($p = 0.032$), duration of illness ($p < 0.001$), knowledge ($p < 0.001$), anxiety ($p < 0.001$), stress ($p < 0.001$), family support ($p < 0.001$), and self-care ($p < 0.001$). Meanwhile, age ($0.376 > 0.05$), education ($0.558 > 0.05$), Complications ($p = 0.925$) and depression ($p = 0.392$) showed no statistically significant associations with the quality of life of patients with type 2 diabetes mellitus ($p > 0.05$).	self-care were significantly associated with the quality of life of patients with diabetes mellitus ($p < 0.05$). In contrast, age, educational level, complications, and depression showed no significant association with the quality of life of patients with type 2 diabetes mellitus.
4.	(Primadani et al., 2023)	Family Support and Emotional Distress on Self-Care Behavior in Patients with Diabetes Mellitus at Gamping 1 Health Center Sleman	Cross Sectional.	Sample: 30 respondents	Family support is positively related, while emotional distress is negatively related to self-care ($p<0.05$).	Family support boosts self-care, while emotional stress lowers it.
5.	(Asnuddin & Dioso, 2025)	The Relationship Between Family Support and Self-Care for People with Diabetes Mellitus	Cross Sectional	Population: 147 patients with diabetes mellitus. Sample: 60 respondents	A statistically significant association was identified between family support and self-care among patients with diabetes mellitus ($p = 0.001$).	The better the family support, the better the patient's self-care behavior.
6.	(Nugroho & Lebdawicaksaputri, 2025)	The Relationship Between Long-Term Illness and Self-Care in Type II Diabetes Patients	Cross Sectional.	100 respondents at the Oesapa health center, Kupang City.	Having diabetes for a long time is not significantly related to self-care ($p=0,122$).	Self-care is influenced not only by how long someone has had diabetes, but also by other factors.

No	Research & Publications	Title	Types or research	Population & Sample	Results	Conclusion
7.	(Babazadeh et al., 2023)	Predictors Off Self-Care Behaviors And Glycemic Control Among Patients With Type 2 Diabetes Mellitus	Cross Sectional	A total of 240 patients with type 2 diabetes mellitus were referred to diabetes care centers in Chaldoran, Iran.	Self-efficacy, knowledge, attitude, intention, and self-care affect glycemic control (HbA1c).	Self-care and self-efficacy are important factors in controlling HbA1c.
8.	(Hijriana et al., 2024)	Factors Affecting Self-Care Management in Type 2 Diabetes Mellitus Patients	Cross Sectional	The study included 37 respondents with diabetes mellitus.	The findings revealed significant associations between knowledge level and self-care management ($p < 0.001$), as well as between activity ability and self-care management ($p < 0.001$).	Self-care management among patients with diabetes can be improved through good self-management, increased diabetes-related knowledge and education, improved activity ability, dietary management, health monitoring, psychological support, and family support.
9.	(Rana et al., 2022)	Psychological Predictors Of Adherence To Self-Care Behaviour Amongst Patients With Type 2 Diabetes Mellitus (T2DM) Visiting Public Hospital, North India	Cross Sectional	A total of 310 patients with type 2 diabetes mellitus (T2DM) receiving care at a tertiary hospital in North India participated in the study.	Self-efficacy, diabetes distress, and fear of hypoglycemia affect self-care.	Psychological factors significantly influence self-care behaviors among patients with diabetes mellitus.
10.	(Hu et al., 2022)	Factors Influencin Self-Care Behaviours Of Patients With Type 2 Diabetes In China Based On The Health Belief Model A : Cross-Sectional Study	Cross Sectional	1,140 patients with type 2 diabetes from 36 villages in China.	Health beliefs, perceived benefits and barriers, as well as self-efficacy affect self-care.	Education based on the Health Belief Model can improve self-care for diabetes patients.
11.	(Rana et al., 2022)	Psychological Predictors Of Adherence To Self-Care Behaviour Amongst Patients	Cross Sectional	A total of 310 patients with type 2 diabetes mellitus (T2DM) who attended a	Self-efficacy, diabetes distress, dan ketakutan hipoglikemia memengaruhi	Faktor psikologis berperan penting dalam perilaku self-care pasien

No	Research & Publications	Title	Types or research	Population & Sample	Results	Conclusion
		With Type 2 Diabetes Mellitus (T2DM) Visiting Public Hospital, North India		tertiary care hospital in North India were included in the study.	self-care.	DM.
12.	(Hu et al., 2022)	Factors Influencin Self-Care Behaviours Of Patients With Type 2 Diabetes In China Based On The Health Belief Model A : Cross-Sectional Study	Cross Sectional	A total of 1,140 patients with type 2 diabetes mellitus were recruited from 36 villages in China.	Health belief, manfaat dan hambatan yang dirasakan, serta self-efficacy memengaruhi self-care.	Edukasi berbasis Health Belief Model dapat meningkatkan self-care pasien DM.

DISCUSSION

The analysis of 12 articles revealed that family support is an important factor associated with self-care behaviors among patients with type 2 diabetes mellitus. Of these, six studies reported a statistically significant association between family support and self-care practices. Further analysis showed that the commonly identified forms of support included family involvement in assisting with daily physical needs, accompanying patients in obtaining and understanding health education, and providing emotional support to reduce psychological distress. (Sagala et al., 2023) showed that family support was associated with adherence to self-care activities among patients with diabetes mellitus, including dietary management, physical activity, medication adherence, blood glucose monitoring, and foot care. These findings indicate that family involvement can help patients maintain self-care behaviors more consistently in their daily lives.

These findings are consistent with (Asnuddin & Dioso, 2025), who showed that family support was associated with self-care among patients with diabetes mellitus. Family support can be provided through assistance, motivation, help in meeting self-care needs, and reminders to follow treatment and maintain a healthy lifestyle. Therefore, family members provide not only emotional support but also practical assistance that enables patients to manage their self-care at home. This support is particularly important because most diabetes management activities are carried out independently by patients as part of their daily routines.

In addition to direct support, family involvement in education can also strengthen patients' ability to perform self-care. (Yuliana, 2021) showed that family-based diabetes self-management education could improve self-care and quality of life among patients with diabetes mellitus. Education involving family members enables both patients and their families to develop a better understanding of diabetes management, allowing families to provide appropriate assistance. This finding is also supported by (Ramadhani et al., 2024), who showed that family-based diabetes management education was associated with improvements in self-care and self-efficacy. This indicates that education not only increases knowledge but can also strengthen patients' confidence in their ability to perform self-care independently.

Psychological factors are also an important part of self-care implementation among patients with Type 2 Diabetes Mellitus. (Primadani et al., 2023) demonstrated a relationship between family support, emotional distress, and self-care behavior among patients with diabetes mellitus. Adequate support can help patients cope with emotional distress while living with a chronic disease. Similarly, (Rana et al., 2022) showed that psychological factors, including self-efficacy, anxiety, depression, and concerns about hypoglycemia, were associated with self-care behavior among

patients with Type 2 Diabetes Mellitus. Patients who have confidence in their ability to manage their disease tend to be better able to perform self-care behaviors. Therefore, psychological aspects need to be considered alongside physical aspects in efforts to improve self-care.

The relationship between patients' beliefs and self-care behavior is also explained through the Health Belief Model approach. (Hu et al., 2022) showed that perceptions of the disease condition, perceived barriers, and self-efficacy were associated with self-care behavior among patients with Type 2 Diabetes Mellitus. Patients' beliefs regarding the benefits of self-care and their ability to overcome barriers may influence their decisions to engage in health behaviors. These findings are supported by (Babazadeh et al., 2023), who showed that attitudes, self-efficacy, and behavioral intentions were predictors of self-care behavior and were associated with glycemic control. This indicates that self-care is determined not only by environmental support but also by beliefs, attitudes, and motivation originating from within the patient.

In addition to family and psychological factors, knowledge plays an important role in self-care. (Hijriana et al., 2024) showed a significant relationship between the level of knowledge and self-care management, with a p-value of 0.000. Activity ability was also significantly associated with self-care management, with a p-value of 0.000. These findings indicate that patients need adequate knowledge about the disease and the ability to apply this knowledge in daily activities, such as dietary management, physical activity, health monitoring, and medication management. With adequate knowledge, patients have a stronger foundation for understanding the importance of self-care and applying it consistently.

The duration of diabetes showed varied findings in the literature. (Ludiana et al., 2024) showed that family support and duration of diabetes were associated with self-care behavior among patients with Type 2 Diabetes Mellitus. However, (Nugroho & Lebdawicaksaputri, 2025) found that the duration of diabetes was not significantly associated with self-care among patients with Type 2 Diabetes Mellitus, with a p-value of 0.122. These differences indicate that disease duration does not automatically result in better self-care. Experience of living with diabetes needs to be accompanied by knowledge, continuous education, family support, and reinforcement of self-efficacy so that it can be translated into consistent self-care behaviors.

Educational factors also play a role in maintaining self-care behavior. (Lan et al., 2025) showed that certain sociodemographic and clinical characteristics, including patient involvement in diabetes education, were associated with self-care among adults with Type 2 Diabetes Mellitus. These findings indicate that education should not only be provided at the beginning of diagnosis but should also be continued according to patients' needs. Strengthening education can help patients update their knowledge, increase confidence, and maintain self-care behaviors over the long term. Ultimately, self-care among patients with Type 2 Diabetes Mellitus is not only related to disease control but also to quality of life. (Irawan et al., 2021) showed that self-care was significantly associated with quality of life among patients with Type 2 Diabetes Mellitus, with a p-value of 0.000. The study also found relationships between quality of life and gender, duration of diabetes, knowledge, anxiety, stress, and family support. Meanwhile, age, education, complications, and depression were not significantly associated with quality of life. These findings indicate that patients' ability to perform self-care is an important aspect that may support disease management and quality of life.

Overall, the findings from the 12 articles indicate that self-care among patients with Type 2 Diabetes Mellitus is influenced by the interaction of various external and internal factors. Family support plays a role in providing physical and emotional assistance as well as educational support, while self-efficacy, psychological condition, knowledge, attitudes, and health beliefs contribute to

patients' ability and willingness to perform self-care. Clinical factors such as duration of diabetes and involvement in education may also be associated with self-care, although findings regarding the duration of diabetes vary between studies. Therefore, improving self-care among patients with Type 2 Diabetes Mellitus requires a comprehensive approach through continuous education, increased self-efficacy, family support, management of psychological factors, and assistance in implementing healthy behaviors. Through this approach, self-care is expected to help patients manage their disease more effectively and maintain their quality of life.

CONCLUSION

Based on the literature review of 12 articles, it can be concluded that self-care among patients with Type 2 Diabetes Mellitus is influenced by various internal and external factors. Factors commonly found to be associated with self-care include family support, self-efficacy, knowledge, psychological conditions, attitudes and beliefs about the disease, activity ability, and diabetes education. Family support plays a role through emotional and instrumental support, motivation, assistance, and help in performing daily care. Meanwhile, self-efficacy, knowledge, and psychological conditions contribute to improving patients' ability and confidence to perform self-care independently and consistently. The duration of diabetes showed different findings across studies; therefore, disease duration alone cannot be considered the main determinant of self-care. Overall, good self-care practices can help patients with Type 2 Diabetes Mellitus manage their disease, maintain health control, prevent complications, and improve quality of life. Therefore, improving self-care requires a comprehensive approach through continuous education, strengthening self-efficacy, family support, management of psychological conditions, and assistance in implementing a healthy lifestyle.

DECLARATIONS

Acknowledgment: The authors thank Sekolah Tinggi Ilmu Kesehatan Sukabumi for the support and guidance in completing this research.

Conflicts of interest: The authors declare that there is no conflict of interest.

Ethical approval: Not applicable. This article is a literature review that does not involve direct human or animal subjects.

Financial support and sponsorship: None. This research received no specific grant and was self-funded.

Data Availability Statement: All data supporting the findings of this study are available from the articles reviewed, which are listed in the References section.

Author Contributions: Dedi Irawan: Conceptualization, methodology, data collection, data analysis, writing - original draft. Johan Budhiana: Supervision, validation, review and editing. Dedi Wahyudin: Supervision, validation, review and editing.

Declaration of the Use of Artificial Intelligence in Scientific Writing: The authors used AI tools for grammar checking and language improvement only, and take full responsibility for the content of this manuscript.

REFERENCES

Asnuddin, & Dioso, R. I. (2025). Hubungan Dukungan Keluarga dengan Perawatan Diri bagi Penderita Diabetes Mellitus. PALUWALA : Jurnal Ilmu Kesehatan, 1(GICHS), 119–123. https://ejournal.airlangga.org/index.php/ghj

Atlas, I. D. (2025). Diabetes Atlas. Internasional Diabetes Federation. https://diabetesatlas.or/resources/idf-diabetes-atlas-2025/

Babazadeh, T., Lotfi, Y., & Ranjbaran, S. (2023). Predictors of self-care behaviors and glycemic control among patients with type 2 diabetes mellitus. Frontiers in Public Health, 10(1). https://doi.org/10.3389/fpubh.2022.1031655

DINKES. (2024). Profil kesehatan provinsi jawa barat tahun 2024. Dinas Kesehatan Provinsi Jawa Barat. https://diskes.jabarprov.go.id/profilkesehatan

Hijriana, I., Chairnnisa, & Mardhiah, A. (2024). Factors Affecting Self-Care Management in Type 2 Diabetes Mellitus Patients. Journal of Healtcare Technology and Medicine, 10(2), 305–313. https://jurnal.uui.ac.id/index.php/JHTM/article/view/4358

Hu, Y., Liu, H., Wu, J., & Fang, G. (2022). Factors influencing self-care behaviours of patients with type 2 diabetes in China based on the health belief model: A cross-sectional study. BMJ Open, 12(8), 1–6. https://doi.org/10.1136/bmjopen-2020-044369

IDF. (2025). Indonesia Diabetes Country report. Internasional Diabetes Federation. https//:diabetesatlas.org/data-by-location/country/indonesia/

Irawan, E., Fatih, H. Al, & Faisha. (2021). r Faktor Yang Mempengaruhi Kualitas Hidup Pasien Diabetes Mellitus Tipe II di Puskesmas Babakan Sari. Jurnal Keperawatan BSI, 9(1), 74–81.

Lan, X., Ji, X., Zheng, X., Ding, X., Mou, H., Lu, S., & Ye, B. (2025). Socio-demographic and clinical determinants of self-care in adults with type 2 diabetes: a multicenter cross-sectional study in Zhejiang province, China. BMC Public Health, 25(1), 10. https://doi.org/10.1186/s12889-025-21622-w

Ludiana, HS, S. A. S., H, U., F, N. L., & Utami, I. T. (2024). Hubungan Dukungan Keluarga Dan Lama Dm Dengan Self Care Behavior Penderita Diabetes Mellitus Tipe 2. 6(11), 4760.

Nadya, H. E., Tjomiadi, C. E. F., Manto, O. A. D., & Mohtar, M. S. (2024). Hubungan Dukungan Keluarga terhadap Perilaku Self Care pada Penderita Ulkus Diabetikum. Jurnal Keperawatan Jiwa, 12(3), 705. https://doi.org/10.26714/jkj.12.3.2024.705-716

Nugroho, F. C., & Lebdawicaksaputri, K. (2025). Hubungan Lama Menderita Penyakit Dan Self Care Pasien Diabetes Mellitus Tipe II. Journal Of Innovation Research and Knowledge, 5(1), 999.

Primadani, M., Kurniasih, E., Djannah, S. N., Kodriati, N., & Mulasari, S. A. (2023). Family Support and Emotional Distress on Self-Care Behavior in Patients With Diabetes Mellitus At Puskesmas Gamping 1 Sleman. Indonesian Journal for Health Sciences, 7(2), 14–21. https://doi.org/10.24269/ijhs.v7i2.6644

Ramadhani, D. Y., Rukmini, Anggraeni, S. M., Larasati, D. S., Elisya, I., & Idia, I. (2024). Family-Based Diabetes Self-Management Education terhadap Self Care dan Self-. Indonesian Journal of Nursing Research, 7(1).

Rana, D., Kumar, R., & Kant, R. (2022). Psychological predictors of adherence to self-care behaviour amongst patients with type 2 diabetes mellitus (T2DM) visiting public hospital, North India. Indian Journal of Endocrinology and Metabolism, 26(6), 558–564. https://doi.org/10.4103/ijem.ijem_116_22

Sagala, N. S., Daulay, N. M., Napitupulu, N. F., Yasin, K. A., & Hairani, W. M. (2023). Hubungan Dukungan Keluarga Dengan Kepatuhan Self Care Activity Pada Penderita Dm Di Puskesmas Gunung Tua Tahun 2023. Jurnal Kesehatan Ilmiah Indonesia (Indonesian Health Scientific Journal), 8(2), 137–140. https://doi.org/10.51933/health.v8i2.1195

WHO. (2024). Diabetes. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/diabetes

Yuliana, S. (2021). Efektifitas Family Based Diabetes Self-Management Education Terhadap Self-Care Dan Kualitas Hidup Pasien Diabetes. 9(4), 879–886.